

Date: 28 July 1997

Task 449
EXPLOSIVE ORDNANCE DISPOSAL/LOW INTENSITY CONFLICT
CANDIDATE PROJECT SUMMARY

Project Title: Acoustic Signature Reduction
Submitting Organization: NAVEODTECHDIV
Contact: Andy Pedersen/310.743-6852,x250

Existing Operational Requirement: No

Specific Technical/Operational Need: Small EOD boats that need to enter mine danger areas must practice magnetic control and acoustic discipline in order to not initiate influence mines. Acoustic discipline impedes the efficiency of EOD operations. There is a need for low signature technologies that will improve operations and safety in mined waters.

Proposed Technical Approach: Adapt active noise cancellation (ANC) technology to reduce the acoustic signature of EOD boats. ANC would involve placing a hydrophone in the water, and use digital signal processing chip with adaptive filtering to rebroadcast the threat frequencies in "anti-phase". The two phases will cancel with a dramatic reduction in the acoustic threat signature of the platform.

Expected Performance: EOD operators would benefit because they could operate their craft at higher speeds and with added safety. In addition, the technique should be adaptable to boats of opportunity.

Existing Capabilities. Current techniques require discipline to be maintained to avoid generating an acoustic threat signature in shallow waters. The only available techniques to reduce the acoustic signature are using above water exhaust and controlling speed.

Schedule (Major Milestones):

	FY99				FY00			
TASK	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Subsystem Selection								
Subsystem Integration								
User Evaluation								
Documentation								

Estimated Cost: FY99 \$200K FY00 \$250K Total \$450K

Potential Performer (Gov't): NAVEODTECHDIV, Code 50, Indian Head, MD.

Potential Performer (Contractor): University of Pennsylvania/ Virginia Tech